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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/759,080

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William Gobush

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EXAMINER

PINHEIRO, JASON PAUL

ART UNIT

PAPER NUMBER

3714

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/759,080	Applicant(s) GOBUSH, WILLIAM CT	
	Examiner Jason Pinheiro	Art Unit 3714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 12, 13 and 18-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-10, 12, 13 and 18-27 is/are allowed.
- 6) ☒ Claim(s) 28-39 is/are rejected.
- 7) ☒ Claim(s) 40 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. After the amendment filed on 10/29/2007, Claims 1, 12-13, 18, 22, 28 and 34-36 were amended, claims 11 and 14-17 were cancelled, and claims 37-40 were newly added. As a result claims 1-10, 12-13, and 18-40 are pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 28-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gobush '367 (US 2002/0173367) in view of Kiraly (US 2004/0032970).

Regarding claims 28 and 37: Gobush '367 discloses a method of monitoring the movement of a striking instrument that impacts with an object (para. 0074, lines 2-7) comprising the steps of: (a) providing a single camera unit (para. 0074, lines 2-7; para. 0076, line 2) having a light sensitive panel (para. 0035, lines 1-3) that is capable of being focused on a first field of view (para. 0015, lines 2-10; para. 0017, lines 1-5); (h) placing a striking instrument having a second plurality of contrasting areas (para. 0003, lines 3-7; para. 0067, lines 14-15) within the first field of view of the single camera unit to provide a first perspective view of the striking instrument and second plurality of contrasting areas (A, Fig. 14; claim 28, lines 1-9); (i) capturing a first image of the first

perspective view of the striking instrument and second plurality of contrasting areas (Figs. 12-13; claim 28, line 10); (j) providing a second perspective view of the striking instrument and second plurality of contrasting areas (B, Fig. 14); (k) capturing a second image of the second perspective view of the striking instrument and second plurality of contrasting areas (Figs. 12-13); (l) analyzing the second plurality of contrasting areas in the first and second images of the striking instrument to determine the three-dimensional positions of the second plurality of contrasting areas (para. 0017, lines 7-9; para. 0028; para. 0029, lines 6-9; claim 28, lines 11-13); and determining at least one of club velocity, attack angle, droop angle, a loft angle, and a face angle from the three dimensional positions of the second plurality of contrasting areas (para. 0099, lines 3-7).

Gobush '367 discloses the above except for the following which Kiraly discloses: (a) providing a single camera unit (para. 0017-0024); (b) providing a calibration fixture having a pivot point and a first plurality of contrasting areas, wherein three-dimensional positions of the first plurality of contrasting areas are known relative to each other (160, Fig. 4; para. 0007, 0009, 0056-58); (c) placing the striking instrument in the calibration fixture at a first orientation within the first field of view, wherein the striking instrument comprises a second plurality of contrasting areas (para. 0007, 0057); (d) capturing a first calibration image of a first perspective view of the calibration fixture and first plurality of contrasting areas and the striking instrument and second plurality of contrasting areas (para. 0007, 0057); (e) rotating the calibration fixture to a second orientation by the

pivot point to provide a second perspective view of the calibration fixture and first plurality of contrasting areas and the striking instrument and second plurality of contrasting areas (para. 0007, 0057); (f) capturing a second image of the second perspective view of the calibration fixture and first plurality of contrasting areas (para. 0007, 0057); (g) analyzing the first plurality and second plurality of contrasting areas in the first and second calibration images to create a three-dimensional global coordinate system (para. 0007).

Therefore, in view of Kiraly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the aforementioned limitations in order to yield the predictable result of reducing expense and weight of having multiple cameras and also to enable calibration of the system through the use of one camera. While Kiraly does not disclose a pivot, it is obvious that in order to keep a fixture attached (so that it cannot be removed so easily), but yet still be able to move the fixture so that a different view of it can be taken, one of ordinary skill in the art would provide a pivot.

Re claim 29: Gobush '367 further discloses that the first perspective view of the striking instrument and second plurality of contrasting areas differs from the second perspective view of the striking instrument and second plurality of contrasting areas from about 5 to about 10 degrees (para. 0038, lines 5-9).

Re claim 30: Gobush '367 further discloses that the step of providing a second perspective view of the striking instrument and second plurality of contrasting areas comprises repositioning the striking instrument (para. 0028;

Fig. 14: to move from position A, which is the first perspective view to position B, which is the second perspective view, the club must be repositioned).

Re claim 31: Gobush '367 further discloses that the step of providing a second perspective view of the striking instrument and second plurality of contrasting areas further comprises maintaining the first field of view of the single camera unit (para. 0017, lines 5-6).

Re claim 32: Kiraly discloses that the calibration fixture has 10 or more contrasting areas (160, Fig. 4).

Re claim 38: Gobush '367 further discloses the system of claim 11, wherein the image analyzer is capable of determining the location of impact of the golf ball on the club face (para. 0099, lines 3-7).

4. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gobush '367/Kiraly in view of Gobush '383 (US 5,471,383).

Gobush '367/Kiraly discloses the above except for a first axis of the global coordinate system parallel to gravity, a second axis of the global coordinate system directed toward a target, and a third axis of the global coordinate system orthogonal to the first and second axes.

Gobush '383 discloses such (col. 11 and 12). Therefore, in view of Gobush '383, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the aforementioned limitations in order to align the sensor panel in the camera. (col. 11, lines 65-67).

5. Claims 34 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gobush '367/Kiraly in view of Gobush '896 (US 2002/0155896).

Re claim 34: Gobush '367/Kiraly discloses the above except for wherein the steps of capturing the first image of the first perspective view of the striking instrument comprises capturing the first image prior to impact with the object.

Gobush '896 discloses such (para. 0075, lines 11-16). Therefore, in view of Gobush '896, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the aforementioned limitations in order to calibrate the striking instrument.

Re claim 36, as understood: Kiraly discloses that the step of capturing a second image of the second perspective view of the striking instrument and second plurality of contrasting areas comprises capturing the second image after impact with the object (para. 0007, 0057).

6. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gobush '367/Kiraly in view of Gobush '719 (US 5,575,719).

The teachings of Gobush '367/Kiraly have been discussed above. However, Gobush '367/Kiraly fails to disclose the accuracy of the image analyzer for determining the golf ball impact location within 0.25 inch.

Gobush '719 teaches the accuracy of the image analyzer for determining the golf ball impact location within 0.25 inch (col. 7, 1st table, 7th "Type of Measurement" under col. "Standard Deviation").

Therefore, in view of Gobush '719, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have an accuracy of the image analyzer for determining the golf ball impact location within 0.25 inch in order to obtain a more accurate measurement of the golf ball impact location.

Allowable Subject Matter

7. Claims 1-27 are allowed.
8. Claim 40 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
9. The following is a statement of reasons for the indication of allowable subject matter: The prior art fails to disclose an image analyzer for determining the golf ball impact location with accuracy within 0.1 inch. While Gobush '719 discloses accuracy within 0.25 inch, it does not disclose accuracy within 0.1 inch.

Response to Arguments

10. Applicant's argument, see Remarks, filed 10/09/2007, with respect to the rejection of claim 36 under 35 USC § 112 have been fully considered and are persuasive. The rejection of claim 36 under 35 USC § 112 has been withdrawn.
11. Applicant's argument, see Remarks, filed 10/09/2007, with respect to the rejection of claims 1-10, 12, 13 and 18-27 under 35 USC § 103(a), have been fully

considered and are persuasive. The rejection of claims 1-10, 12, 13 and 18-27 have been withdrawn.

12. Applicant's arguments filed 10/09/2007 have been fully considered but they are not persuasive. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Pinheiro whose telephone number is 571-270-1350. The examiner can normally be reached on M - F 8:00 AM - 4 PM;.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pezzuto can be reached on (571) 272-6996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JP
01/14/2008


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